From:	Wright, Jeff
To:	Gary Moore/R6/USEPA/US@EPA
Cc:	Bordelon, David
Subject:	RE: Delta Shipyards - Looking at the Sampling Data - consideration of future actions
Date:	01/16/2013 12:18 PM

Gary –

I would suggest we model our Treatability Study after the LDEQ Bayou Trepagnier and EPA Malone Service project. The minimum unconfined compressive strength criterion for Bayou Trepagnier was 8 psi. This was achieved within 3 to 7 days. After 28-days the UCS of the solidified material ranged from 52 to 63 psi. Their mix reagents were Cem-Lime (10% by wt) and 50:50 blend of fly ash and bed ash at a ratio of 10 to 15% by wt. This would correspond to Greg Powell's suggestion of fly ash and lime/cement studies. Note – Weston reps in Houston had also suggested cement and fly as well, so there seems to be a consensus on the reagents. I did not see any permeability tests or SPLP analysis in the Bayou Trepagnier report; I would however suggest we have these tests conducted after achieving our UCS criteria. Determining the UCS, permeability, and SPLP leachability characteristics were Treatability Objectives outlined in the Malone Service Work Plan that you forwarded to me.

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From: Moore.Gary@epamail.epa.gov [mailto:Moore.Gary@epamail.epa.gov]
Sent: Tuesday, January 15, 2013 7:46 PM
To: Wright, Jeff
Subject: RE: Delta Shipyards - Looking at the Sampling Data - consideration of future actions

Jeff:

Maybe we should do 10 psi, 25 psi, and 50 psi so that we will have a comparison of mixture vs UCS achieved and then we can dial in the recipe to what we need to achieve. What mix reagents do your experts recommend for this type of material? What do you think?

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From: "Wright, Jeff" <Jeff.Wright@WestonSolutions.com>

To: Gary Moore/R6/USEPA/US@EPA

Cc: "Bordelon, David" <David.Bordelon@WestonSolutions.com>

Date: 01/15/2013 04:16 PM
Subject: RE: Delta Shipyards - Looking at the Sampling Data - consideration of future actions

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I mentioned that I spoke with John Halk last week. I haven't heard back from him but the criteria at the Bayou Trepagnier site (LDEQ) was 8 psi; however most results were above 50 psi. I was able to download the Pilot Study Work Plan from the LDEQ website. It seems to be a similar version of the Malone Service Company Work Plan that you sent out but it is designed for an on-site treatability study. I would propose that we provide the Treatability Lab with our solidification criteria (UCS - 50 psi) along with the type of mix reagents and get them to provide a proposal for testing. This proposal is relatively inexpensive (~$300) and would provide information needed to compile an overall Work Plan (eg., specific testing procedures, analytical analysis, treatability costs and estimated completion date). Let me know what you think.

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From: Moore.Gary@epamail.epa.gov [mailto:Moore.Gary@epamail.epa.gov]
Sent: Thursday, January 10, 2013 3:54 PM
To: Wright, Jeff
Subject: Fw: Delta Shipyards - Looking at the Sampling Data - consideration of future actions

FYI

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----- Forwarded by Gary Moore/R6/USEPA/US on 01/10/2013 03:53 PM -----

From: Greg Powell/CI/USEPA/US

To: Gary Moore/R6/USEPA/US@EPA

Date: 12/05/2012 05:22 AM
Subject: Re: Fw: Delta Shipyards - Looking at the Sampling Data - consideration of future actions

Hi Gary:
The treatability is needed. Fly ash may be the best bet, but quicklime /cement should be evaluated. The problem with lime addition is that the higher pH's can sometimes re-mobilize the metals; however, a treatability study will give us that data.

No issues with John's comments.

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From: Gary Moore/R6/USEPA/US
To: "Greg Powell" <powell.greg@epa.gov>
Date: 12/04/2012 01:28 PM
Subject: Fw: Delta Shipyards - Looking at the Sampling Data - consideration of future actions

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Greg:

Take a look and tell me what you think?

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----- Forwarded by Gary Moore/R6/USEPA/US on 12/04/2012 12:27 PM -----

From: John Ha k <John.Halk@LA.GOV>
To: "Wright, Jeff" <Jeff.Wright@WestonSolutions.com>
Cc: Gary Moore/R6/USEPA/US@EPA, Todd Th bodeaux <Todd.Thibodeaux@LA.GOV>
Date: 12/04/2012 11:14 AM
Subject: FW: Delta Shipyards - Looking at the Sampling Data - consideration of future actions

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Jeff:

Pit sludge exhibits some metals and PAH contaminants, as expected with hydrocarbon waste from ship/barge cleanout operations. For treatability samples, it is recommended to test reagent blends of fly ash, bed ash, or cement/lime (Cem-Lime)– a mixture of Portland cement and hydrated lime. Cement/lime mixture is probably best choice – it sets quickly, gives good unconfined compressive strength (recommended 8 psi or better), and can be transported to the site and mixed with long arm excavator.

Collect samples from highest COC locations within the pits and be sure to include highest visual oily material, representative of solid/liquid matrix of the sludge.

It is important to note, that the treatability testing is just that, and we are not pre-judging any future actions as to whether to go ahead with removal activities (whether in-situ or off-site), do other stabilization activities, such as strengthening levees. We can later have meetings to discuss any future action.

Also I think it is okay to use the RECAP Industrial Soil Screening Level as a comparison value to EPA RSLs outside the pit areas. Performing a 95 percent UCL on the outside sample locations (exclusive of the pits) may eliminate the arsenic and PAH constituents at RECAP industrial screening levels. The state RECAP standard for Arsenic is 12 ppm, so running a 95UCL may eliminate the samples outside of the pits.

We can afford to be less conservative inside the pits since this material could be treated and solidified. Please feel free to contact Todd or myself to further discuss the site. All in all, the sampling data looks much better than we anticipated.

Thanks,
John Halk, CHMM

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